FAA-E-2285
May 16, 1967
SUPERSEDING
CAA-R-1184, 7/31/58

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION SPECIFICATION

REMOTE COMMUNICATIONS OUTLET CONTROL SYSTEM

1. SCOPE

1.1 Scope.- The equipment specified herein, formerly entitled "Control Panel, Flight Assistance Service, Air/Ground Console" consists of two units, a Control Panel and a Relay Panel. Its principle application is for the control of transmitters and receivers remoted from a Flight Service Station. A Voice Frequency Tone Carrier Signalling System is generally used in conjunction therewith.

2. APPLICABLE DOCUMENTS

2.1 FAA Specifications.- The following FAA specifications, of the issues specified in the invitation for bids or request for proposals, form a part of this specification.

FAA-R-1030	Packing of Electronic Equipment
FAA-D-1272	Instruction Booklets, Electronic Equipment (see 3.1.1 hereof)
FAA-G-2100/1	Electronic Equipment, General Requirements; Part I, General Requirements for all Equipments

3. REQUIREMENTS

3.1 Equipment to be furnished by the contractor.- Each control panel and relay panel shall be complete in accordance with all specification requirements. Instruction booklets shall be furnished in accordance with 3.1.1.

3.1.1 Instruction Booklets.- A single instruction booklet in accordance with FAA-D-1272 shall cover both the control panel and the relay panel. The quantity of booklets shipped with each equipment (as specified in the contract schedule), shall be packed and shipped with the relay panels.

3.2 Definitions

3.2.1 Equipment.- The term "equipment" shall mean a set of two units, the Control Panel and the Relay Panel.

3.2.2 Terms.- Such terms as "Wide", "High", "Top", "Bottom", etc., shall apply as the unit is viewed from the front in the normal mounted position in a rack or console, unless otherwise specified.

3.3 Tolerances.- Front panel dimensions and mounting hole position tolerance shall be ± 1/64 inch.

3.4 Construction - Control Panel.- The following subparagraphs shall apply to the construction of the Control Panel only.

3.4.1 Front Panel.- The control panel shall be constructed on a 3/16 aluminum alloy panel. Panel material shall be in accordance with Note 1 on drawing D-21140C. The panel dimensions shall be 7-31/32 inches wide by 4-31/32 inches high. All edges shall be square cut or ground to dimensions and shall be free from burrs and deformations. There shall be four mounting holes in the panel, spaced 7-1/2 inches along the top and bottom edges and 4-1/2 inches along each side. Each hole shall be centered 15/64 inch from the two adjacent edges. The holes shall be drilled and countersunk for 10-32 flathead machine screws. Parts shall be arranged on the front panel in accordance with drawing B-40030-25A.

3.4.2 Front panel markings.- Front panel markings shall be in accordance with drawing B-40030-25A.

3.4.3 Wiring.- Wiring shall be in accordance with the schematic drawings DR-C-40030-23B, and DR-C-40030-24C.

3.4.4 Connector sockets.- The connector sockets J-1 and J-2 shall be positioned on the back of the units, adjacent to the lower edge. J-1 shall be to the right-hand side as the unit is viewed from the rear, and J-2 to the left.

3.4.5 Dust cover and chassis.- There shall be a dust cover that completely encloses all of the parts on the back of the front panel except for plugs P-1 and P-2. Cutouts shall be provided so that plugs P-1 and P-2 can be inserted into their respective sockets. The cutouts shall fit the chassis mounted connector sockets to within not over 3/64 inch and not less than 1/64 inch at all points. The dust cover shall not exceed seven inches in width and four inches in height. A clearance of not less than 31/64 inch shall be provided on the back surface of the front panel between the dust cover and the top and bottom edges of the panel. With the dust cover in place, it shall be centered on the panel, both vertically and horizontally. The depth measured from the back of the panel shall not exceed seven inches including mating connector plugs. Aluminum alloy material, minimum gauge .063 inch shall be used for the dust cover and chassis.

3.4.6 Parts - type and quality.- Parts shall be the types specified below, or equal:

Switches	Lever-key switch, black handles, Switchcraft Company, Chicago, Illinois
Light Assemblies	For 46 to 48 volts per FAA-G-2100/1, Lens colors - 1 red, 1 white, 1 yellow, 7 green
Indicating Lamps	For 46 to 48 volts per FAA-G-2100/1
Knob	MS-91528-1N2B per FAA-G-2100/1
Potentiometer (R-1)	Composition, 20,000 ohm +10%, 2 watt Taper "A", per FAA-G-2100/1
Buzzer	48 volts DC, case insulated from coil and contacts for 500 volts DC, Edwards & Company, Type 15, Size 0
Relays	Small telephone type, coil 48 volts DC, nominal resistance 1300 to 2000 ohms, dual contacts, Davis Electric Company, Cape Girardeau, Mo.
Designation strips	Western Electric Company, New York, N. Y., Code 8H, 1 each 6-3/4 inches long, 2 each 3 inches long
Sockets	H. B. Jones Division, Cinch Mfg. Corp., Chicago, Illinois, J-1 with angle bracket No. S-327-AB; J-2 with angle bracket No. S-318-AB; to permit these units to be used interchangeably with previously obtained equipment, the sockets must be identical to those listed above
Plugs	To match sockets J-1 and J-2, with cable clamp in cap

3.5 Construction - Relay Panel.- The following subparagraphs shall apply to the Relay Panel only.

3.5.1 Panel and mounting bracket.- The relay panel shall be constructed on a standard relay rack panel, size "C" (Drawing D-21140C). The relays, connector jack, and transformer shall be mounted on a vertical mounting bracket or chassis. The connector J-11 shall be mounted at the left-hand end of the mounting bracket as seen from the rear. The total depth of the unit shall not exceed eight inches from front to back. The front panel shall extend at least 1-1/4 inches beyond the mounting bracket and components, on each end, and 1/4 inch at top and bottom.

3.5.2 Wiring.- Wiring shall be in accordance with schematic diagram No. DR-C-40030-20B.

3.5.3 Parts type and quantity.- Parts shall be the types specified below, or equal:

Relays	Telephone type, coil 48 volts DC, Nominal resistance 2000 ohms. Dual contacts. Relays shall be plug-in type, C. P. Clare Co., Type JDP
Relay socket	Similar to C. P. Clare, Co., Type JDP with clear plastic dust cover
Resistor R-1	6200 ohm, 1/2 watt, ±5% per FAA-G-2100/1
Transformer	Audio matching per FAA-G-2100/1. Input impedance 6600 ohms; output impedance 600 ohms. Input level up to 22 dbm. Frequency range 300 to 3000 Hz ±1 db. Insulation resistance between windings and between windings and case shall be at least one megohm. Insertion loss shall not exceed 0.75 db at 1000 Hz with an input level of 22 dbm.
Connector Socket	J-11, H. B. Jones Division, Cinch Mfg. Co., No. S-327-EB; to permit these units to be used interchangeably with previously obtained equipment, the socket must be identical to that listed above.
Plug	P-11, matching plug for connector socket J-11, with cable clamp in cap.

3.6 Nameplates

3.6.1 Relay panel.- The relay panel nameplate shall be mounted on the front panel. The equipment shall be entitled RCO RELAY PANEL .

3.6.2 Control panel.- The control panel nameplate shall be mounted on the rear vertical surface of the dust cover. The equipment shall be entitled RCO CONTROL PANEL .

4. QUALITY ASSURANCE PROVISIONS

4.1 General.- See FAA-G-2100/1.

4.1.1 Production tests.- Each equipment shall be inspected and/or tested to demonstrate specification requirements for the following items:

Correctness of assembly, dimensions, workmanship, and appearance.

Correct wiring and continuity.

Operation of controls, switches, relays, and lamps. Relay operation shall be checked at 40 volts DC and 48 volts DC.

4.1.2 Other tests not required.- Design qualification tests and type tests are not required (modifies FAA-G-2100/1).

5. PREPARATION FOR DELIVERY

5.1 General.- See FAA-R-1030.

5.2 Individual packing.- Where two or more units are packed in a common shipping container, each unit with its accessories shall be packed and marked so that it can be identified and reshipped individually without repacking.

6. NOTES

6.1 Notes.- None.

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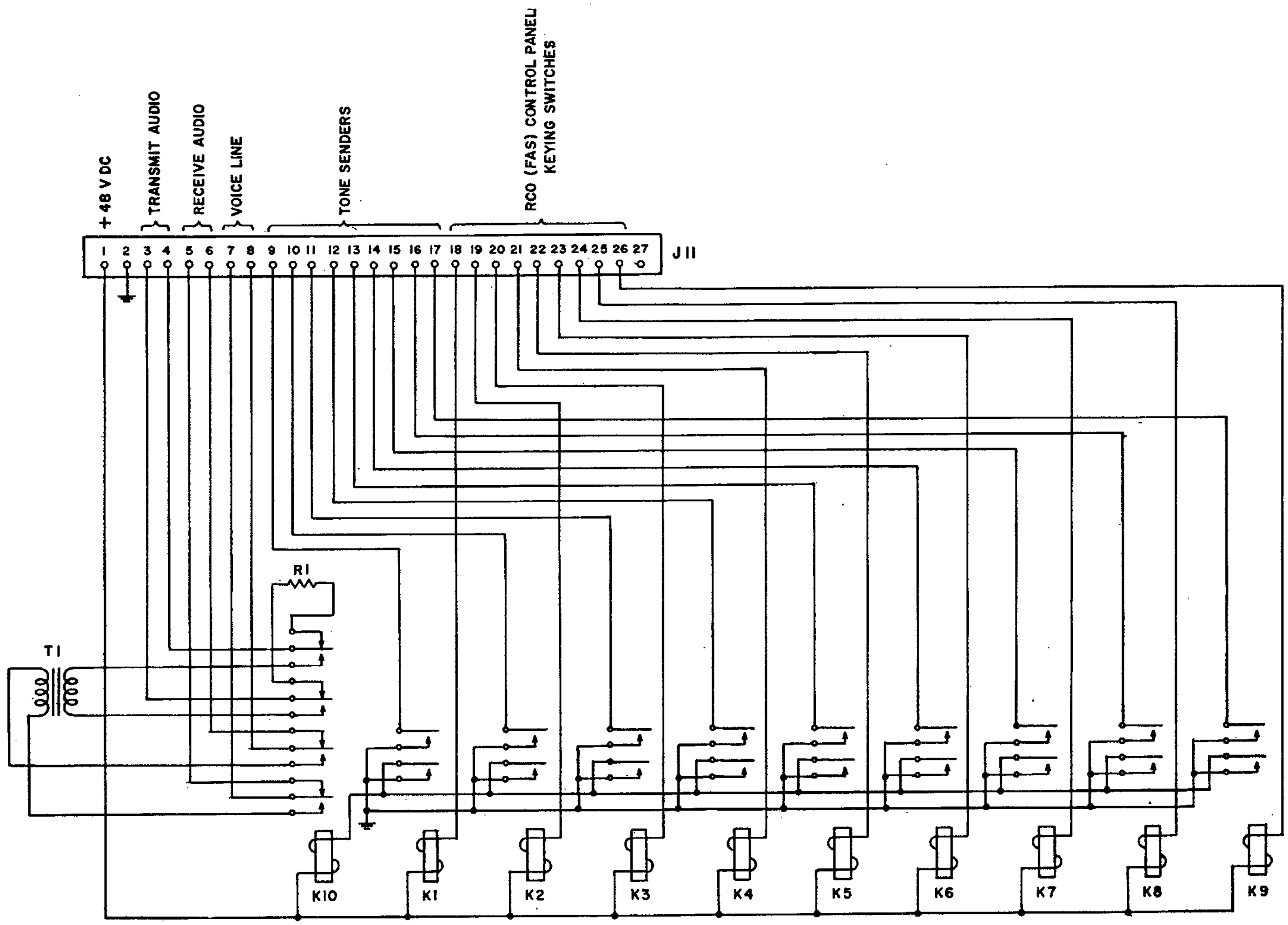
67-4994

Attach: DR-B-40030-25A
DR-C-40030-24C
DR-C-40030-23B
DR-C-40030-20B



NOTES:
1. THIS DRAWING IS NOT COMPLETE WITHOUT SPEC. FAA.-E-2285

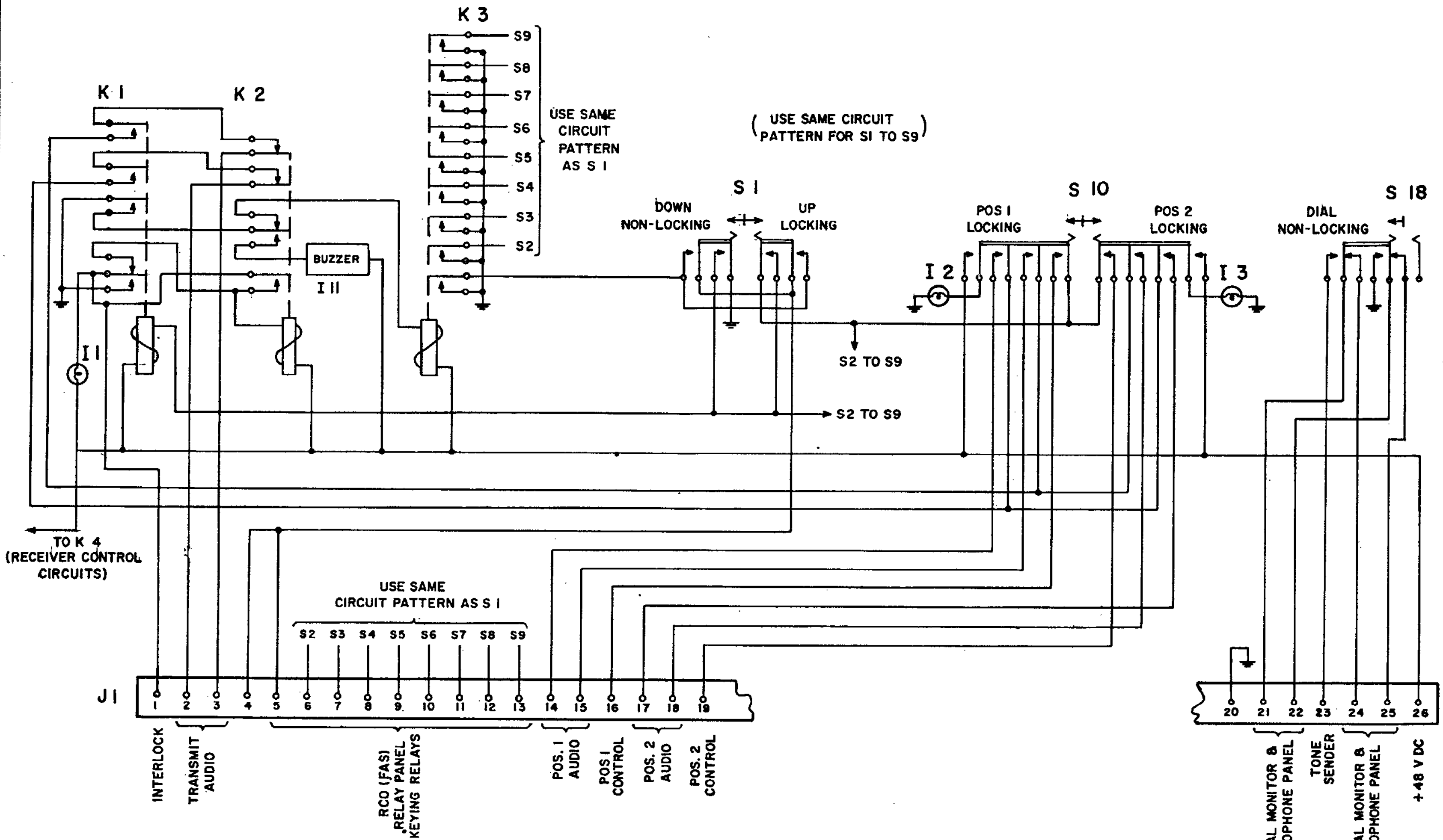
LET	REVISION	DATE	CKD
B	SPEC. WAS CAA-R-1184	9/19/67	WBS
A	UPDATED/CLARIFIED DESIGNATIONS	11-16-62	

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
OFFICE OF AIR NAVIGATION FACILITIES
COMMUNICATIONS ENGINEERING DIVISION

AIR GROUND CONSOLE
RCO (FAS) RELAY PANEL
SCHEMATIC

DR.	CKD.	SUBMITTED	APPROVED
SMF		C.C.W.	[signature], Act. CHIEF OF DIVISION

DATE 7-26-58 DR-C-40030-20-B



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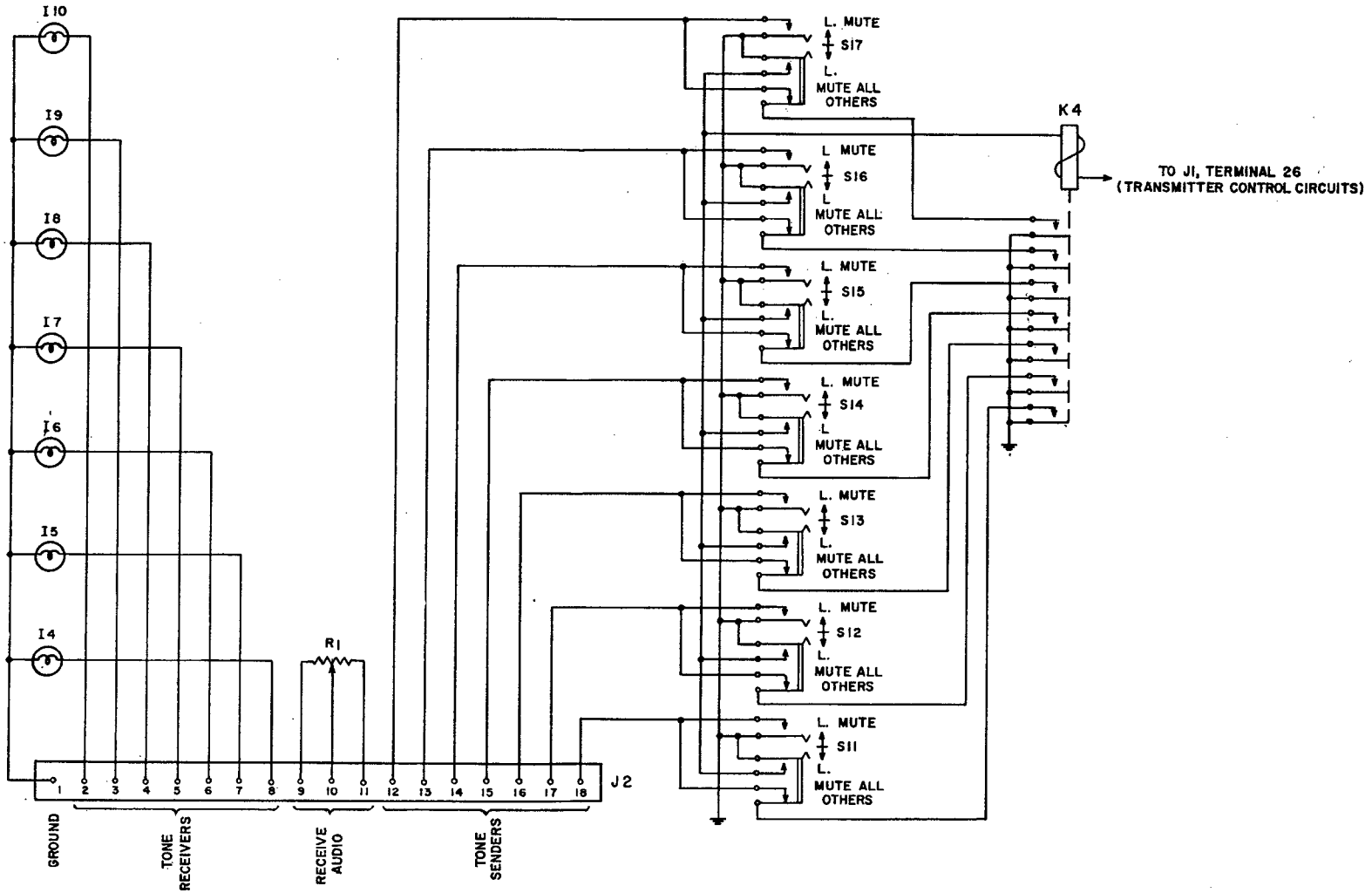
1. THIS DRAWING IS NOT COMPLETE WITHOUT SPEC. FAA-E-2285

LET	REVISION	DATE	CKD.
B	SPEC. WAS CAA-R-1184	4/10/67	WBS
A	UPDATED/REMOVED NOTE/CLARIFIED DESIGNATIONS	11-16-62	

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
OFFICE OF AIR NAVIGATION FACILITIES
COMMUNICATIONS ENGINEERING DIVISION

AIR GROUND CONSOLE
RCO (FAS) CONTROL PANEL
TRANSMITTER CONTROL CIRCUITS

DRN. S.M.F | SUBMITTED: C.C.W. | APPROVED: [signature] | DATE 8-2-58 | DR-C-40030-23-B



NOTES:

1. NOT COMPLETE WITHOUT SPEC. FAA-E-2285

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
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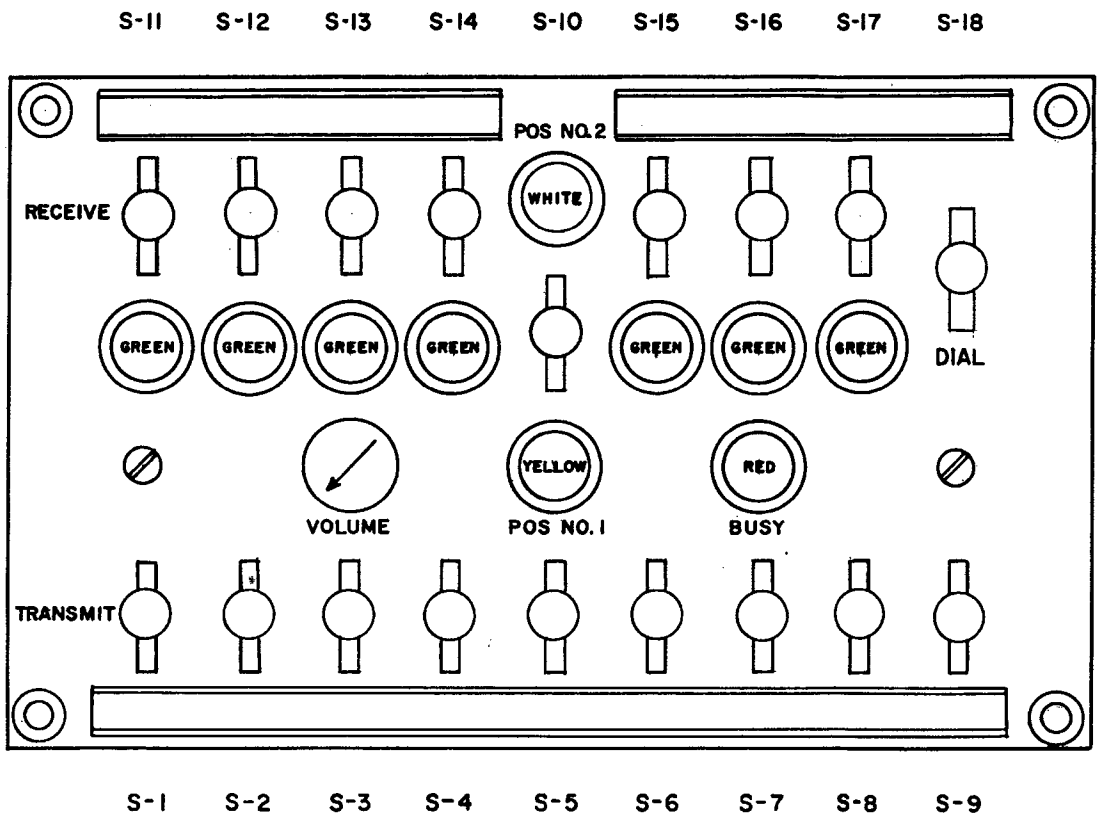
COMMUNICATIONS ENGINEERING DIVISION

AIR GROUND CONSOLE
ROC (FAS) CONTROL PANEL
RECEIVER CONTROL CIRCUITS

LET.	REVISION	DATE	CKD.	DWN.
C	SPEC. WAS CAA-R-1184	9-15-60		
B	UPDATED/REMOVED NOTE/ADDED DESIGNATIONS	11-16-59	CKD.	S.M.F.
A	NOTE 2 ADDED	2-24-59		

SUBMITTED: C.C.W. DATE 8-7-58
APPROVED: Chief of Division
DR-C-40030-24-C



UP-MUTE
ALL OTHERS

DOWN-MUTE

NOTE:

1. THIS DRAWING IS NOT COMPLETE WITHOUT SPEC. FAA-E-2285

LET	REVISION	DATE	CKD.
A	MOVED DIAL SWITCH DOWN; SPEC. NO. CHANGED FROM CAA-R-1184 TO FAA-E-2285	4/6/60	WOS

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
OFFICE OF AIR NAVIGATION FACILITIES
COMMUNICATIONS ENGINEERING DIVISION

AIR GROUND CONSOLE
FAS CONTROL PANEL

CKD.	SUBMITTED:	APPROVED:
[illegible] EB	C. C. W.	[illegible]
DRN. S.M.F.	DATE 8-9-58	DWG B-40030-25 A